Maple Chase Company
2820 Thatcher Road
Downers Grove, Illinois 60515
United States of America

An Invensys company

Robertshaw®

INTEGRATED COMFORT SOLUTIONS™

9710

DELUXE
PROGRAMMABLE
THERMOSTAT

E ELECTRIC G GAS

7 Day Programmable
3 Heat / 2 Cool

User's Manual

Quick Start Installation and Programming

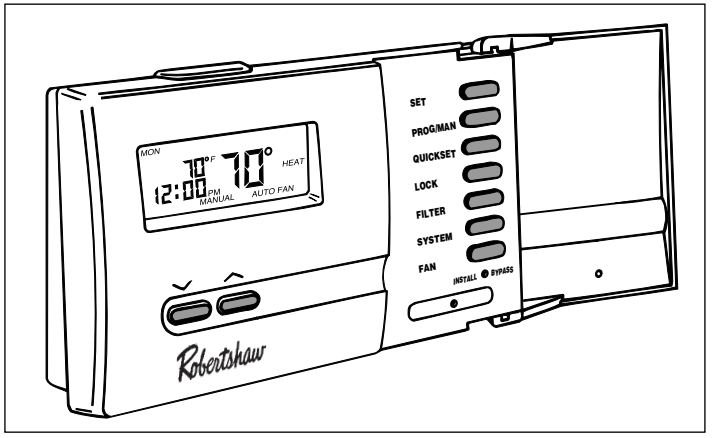
110-664B

ENERGY STAR EPA DOE

UL

FIVE YEAR 5 WARRANTY

PRODUCT FEATURES



As an EnergyStar Partner, Maple Chase has determined that this product meets the EnergyStar guidelines for energy efficiency.

- *Attractive, Styleline™ design*
- *4-pre-programmed set-points*
- *Energy Star compliant*
- *7-day programming; 4 setpoints per day*
- *QuickSet™ programming mode*
- *Autochangeover mode automatically switches system from heat to cool*
- *Programmable fan control*
- *Detachable sub-base allows you to remove mounted thermostat for easy, convenient programming.*
- *Energy Efficient Recovery (EER™) mode for maximum savings.*
- *Filter monitor notifies when to change or clean furnace filter*
- *Programmable keypad lock prevents unauthorized re-programming*
- *NiteView™ LCD display backlight*
- *Programmable residual cooling fan delay for increased air conditioning efficiency*
- *Allows for up to 3 remote temperature sensors*
- *Visual and audible low battery signal*
- *High temperature protection*

FIVE YEAR LIMITED WARRANTY

Maple Chase Company warrants to the original contractor installer or to the original consumer user, each new Robert Shaw thermostat to be free from defects in materials and workmanship under normal use and service for a period of five (5) years from the date of purchase.

This warranty does not cover batteries, damage caused by batteries, damage resulting from improper installation, alteration, misuse or abuse of the thermostat occurring after the date of purchase.

Maple Chase Company agrees to repair or replace at its option any thermostat under warranty provided it is returned within the warranty period, postage prepaid, with proof of the date of purchase. Cost of thermostat removal or reinstallation is not the responsibility of Maple Chase Company.

Repair or replacement as provided under this warranty is the exclusive remedy of the consumer. This warranty and our liability does not apply to batteries on the merchandise that has been damaged caused by misuse, neglect, mishandling, alterations, improper installation, or use in a way other than in accordance with Maple Chase Company's recommendations and instructions. Except to the extent prohibited by applicable law, any implied warranty of merchantability or fitness for a particular purpose on this product is limited to the duration of this warranty.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

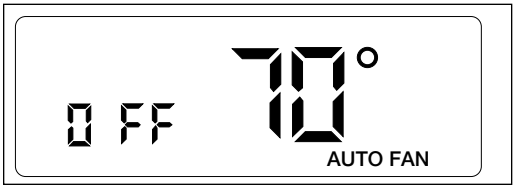
Instructions for return:

Pack the thermostat carefully in a well-padded carton. Be sure to include a note describing, in detail, what is wrong with the product. Return, postage prepaid, to: **Uni-Line North America** 515 South Promenade Ave., Corona, CA 91719, Attn: Warranty Department

Symptom	Remedy
Thermostat does not automatically switch from HEAT to COOL mode of operation.	Verify that thermostat is in PROGRAM mode and AUTO is indicated in the display for proper AUTO (changeover) operation. Auto (changeover) may have been disabled during installation. (See "SELECTING AUTO CHANGEOVER".)
Fan runs continuously for hours at different times of the day	Review programmable fan settings entered during programming. (See "PROGRAMMING".)
Filter monitor indicates "CHECK FILTER" too soon for proper filter servicing interval.	Check with your filter supplier and modify Filter Monitor settings to match your servicing intervals. (See "PROGRAMMING FILTER MONITOR".)

If problems with thermostat cannot be solved, call:
Technical Support: (800) 445-8299
Monday-Friday 7:30 - 5:30 Central Standard Time
If calling after hours, a 24-hour automated help line is available.

KEYPAD QUICK REFERENCE



MAIN DISPLAY (OFF MODE)

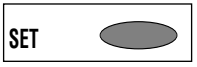
A few seconds after power up or RESET, the display shown above will appear. The thermostat will be in OFF mode.

1. Press SYSTEM button to enter HEAT, COOL, or AUTO* (changeover) modes of operation.
2. Press PROG/MAN button to enter program or manual modes. Pressing PROG/MAN returns thermostat to main display from any menu.

*AUTO may only be entered if "AUTO CHG" was enabled during installation and you are in PROGRAM mode. (See "CHANGING DIP SWITCH SETTINGS.")

Decreases or reverses setting on display.

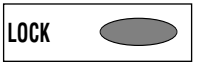
Increases or advances setting on display.



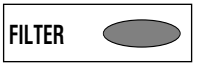
SET - Begins, saves, and advances programming inputs

PROG/MAN - Sets thermostat to either program or manual mode. Provides quick return to normal operating mode from any menu

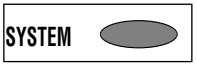
QUICKSET - Allows quick programming by enabling user to program all seven days at once



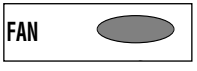
LOCK - Accesses keypad "lock" and "unlock" feature



FILTER - Accesses filter monitor and status



SYSTEM - Accesses 4 modes of operation: HEAT, COOL, AUTO (changeover), or system OFF



FAN -Accesses two modes of fan operation: auto and on

The Robertshaw Model 9710 is compatible with 24V AC multi-stage gas, oil, or electric heating/cooling systems with up to 3 stage heat/2 stage cool. It will operate with multi-stage heating/cooling systems that are automatic or manual changeover.

This thermostat will automatically control the heating and/or air conditioning system. Once programmed, it will automatically adjust the temperature setting and fan operation at your programmed times. When used properly, this thermostat can reduce heating and cooling costs throughout the year.

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Symptom	Remedy
System will not enter AUTO (Auto Changeover) mode.	Thermostat must be in PROGRAM mode to run AUTO system operation. Press PROG/MAN button until PROGRAM is indicated in display. Then, press SYSTEM button until AUTO is indicated in display.
Room temperature reading is inaccurate.	If you have attached remote sensors, the thermostat will display the average temperature of the activated sensors. See "INSTALLATION INSTRUCTIONS" and "CHANGING DIP SWITCH SETTINGS". If there are no remote sensors attached, make sure that the remote sensor dip switch settings on the rear of the thermostat body are turned off and the MAIN thermostat dip switch is turned on. See "CHANGING DIP SWITCH SETTINGS."
Thermostat will not let me change setpoint temperature above or below a certain point.	AUTO (changeover) mode may be active. See OPERATION - Selecting Changeover). AUTO will be indicated in display.
Thermostat turns on system before my programmed setpoint time. have programmed.	Energy Efficient Recovery (EER™) is in effect. This optional feature turns on the system prior to the next setpoint time to reach the temperature you See "PROGRAMMING" and “ENERGY EFFICIENT RECOVERY.”
"CHECK FILTER" is indicated in main display.	See "PROGRAMMING - Programming Filter Monitor".

Symptom	Remedy
Thermostat does not follow program.	Check AM/PM indicators at time of day and programmed time changes. (See "PROGRAMMING.") Thermostat may be OFF. Select HEAT or COOL mode by pressing SYSTEM button. Program may not have been done in HEAT or COOL modes. (See "PROGRAMMING".) Both HEAT and COOL programs utilize the same setpoint time and programmable fan settings. Only setpoint temperatures can be different. (See "PROGRAMMING".) Check compatibility guide and system specifications. Thermostat in MANUAL mode. (See "OPERATION.") Thermostat may not have been programmed in HEAT or COOL position. Verify program. (See "PROGRAMMING –To Review or Change Program.")
System runs too long.	Temperature differential may be set too high. Decrease temperature differential to lower setting, see "PROGRAMMING".

IMPORTANT SAFETY INFORMATION

⚠ WARNING:

- Always turn off power at the main power source by unscrewing fuse or switching circuit breaker to the off position before installing, removing, or cleaning this thermostat.
- Read all of the information in this manual before programming this thermostat.
- This is a 24V AC low-voltage thermostat. Do not install on voltages higher than 30V AC.
- If you experience a loss of power this thermostat will indicate "-**AC**" in the time field of the LCD display. This means that your system's 24V AC circuit is not receiving power or is not functioning correctly. The back-up batteries provided in this thermostat will maintain the programming during the loss of power, however, the thermostat requires 24V AC power and a functioning system for proper control.
- All wiring must conform to local and national building and electrical codes and ordinances.
- Do not short (jumper) across terminals on the gas valve or at the system control to test installation. This will damage the thermostat and void the warranty.
- This thermostat is equipped with automatic compressor protection to prevent potential damage due to short cycling or extended power outages. The short cycle protection provides a 5-minute delay between heating or cooling cycles to prevent the compressor from being damaged.
- Do not switch system to cool if the temperature is below 50°F (10°C). This can damage the cooling system and may cause personal injury.

- This thermostat is 24V AC powered and requires connection to both sides of the transformer for proper operation. It also requires four charged “AA” ENERGIZER® brand batteries or equivalent alkaline batteries as a back-up source of power should the 24V AC circuit be interrupted temporarily due to a power outage. The battery back-up will maintain all program information during power outage.
- Replace back-up batteries every year or when “LO BATT” indicator appears on the thermostat display.
- Use this thermostat only as described in this manual.

HELPFUL PROGRAMMING TIPS

- Make sure the SYSTEM switch is in the HEAT or COOL position before programming. The thermostat will not allow programming in AUTO or OFF modes.

- Make sure you set the time of day (note AM/PM indicator) and day of week accurately to ensure correct operation.
- The program schedule has a winter (HEAT) and a summer (COOL) program. Both schedules will use the same time and programmable fan settings, but can have different temperature settings. If you change the time or programmable fan setting in one program, the opposite program will change also.

Symptom	Remedy
Heat turns on instead of cool and vice versa.	Check wiring and system specifications.
Thermostat turns on and off too much.	Increase temperature differential setting. (See “PROGRAMMING.”)
Display is indicating “LO BATT.”	Replace back-up batteries soon. Be sure battery installation is correct. (See “REPLACING THE BACK-UP BATTERIES.”)
Thermostat beeps once per minute and "LO BATT" is indicated in display.	Back-up batteries low. Change batteries immediately. (See "REPLACING THE BACK-UP BATTERIES".)
LCD display is blank.	Replace batteries to control system. (See "REPLACING THE BACK-UP BATTERIES".)
Thermostat does not change when the ∨ or ∧ buttons are pressed.	SYSTEM button is in OFF or is in AUTO (changeover) position.
Thermostat beeps and does not allow temperature changes when ∨ or ∧ buttons are pressed.	Autochangeover "deadband" conflict (See "SELECTING AUTO CHANGEOVER".) or thermostat is locked.

TROUBLESHOOTING

Symptom	Remedy
Thermostat does not turn on system.	Check wiring. (See "Installation Instructions" included with thermostat.) Check to see if "OFF" is indicated in display. Select HEAT or COOL mode by pressing SYSTEM button. Compressor short cycle protection may be in effect. Press INSTALL/BYPASS behind front door to override. (See "COMPRESSOR PROTECTION.")
Second stage of heat or cool turns on too quickly.	Increase second stage temperature differential setting. (See "PROGRAMMING.")
System turns on as much as two hours before setpoint time.	Energy Efficient Recovery (EER™) mode is active. Thermostat is operating normally. (See "PROGRAMMING-Energy Efficient Recovery.")
Display is indicating "-**AC**" in time field.	This indicates the thermostat has detected that the 24V AC circuit to which it is attached is not functioning. Check wiring, fuses, and power source to determine the cause of the problem. The back-up batteries in this thermostat will maintain the programming until system power can be restored. (See "24V AC CIRCUIT POWER MONITOR.")

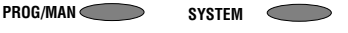
HELPFUL PROGRAMMING TIPS (Cont.)

- The Energy Efficient Recovery (EER™) looks ahead up to 2 hours prior to the end of the set-back (or set-up) period to begin monitoring system performance and calculating when to turn your system on. It will also determine whether the auxiliary heat or cool stages should be activated prior to setpoint time to meet your chosen setpoint temperature. The thermostat will indicate "**EER**" in the display when this program feature is active.

  The EER™ feature will lock out the auxiliary stages until 30 minutes prior to the upcoming setpoint time to utilize the most energy efficient first stage. The auxiliary stages of heating and cooling will be available during this lock-out period to maintain the setpoint temperature should the system not be able to keep up with the heating or cooling demand.

- To control the system, press the SYSTEM switch until HEAT, COOL, or AUTO appears in the display. The thermostat will not properly control the system to your desired setpoint temperature unless it is in one of these operating modes.

- To enter AUTO, you must first be in PROGRAM mode. Press PROG/MAN button until PROGRAM appears in display. Then press SYSTEM button to enter AUTO.



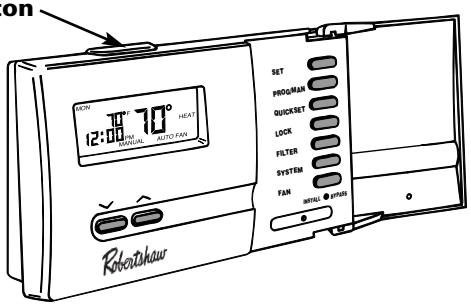
- The QuickSet™ feature programs each individual day simultaneously with the identical program. Each and every day can then be individually modified to suit specific needs/desires.

NITEVIEW™ LCD DISPLAY BACKLIGHT

This thermostat incorporates a revolutionary new display backlight to make nighttime temperature or program adjustments quick and easy. The NiteView™ display backlight uses modern lighting technology to provide an even-flowing light behind the display. There are two ways to activate the backlight:

1. Every time you press a keypad button or the ∨ or ∧ buttons to make an adjustment, the backlight will automatically turn on illuminating the display. The backlight will turn off after about a minute of inactivity.
2. Press the NiteView™ display backlight button located on the top of the thermostat (over the LCD display). The backlight will turn off after about 15 seconds of inactivity.

NiteView™ light button



CLEANING

⚠ **DANGER:** ELECTRIC SHOCK HAZARD. Turn off power at the main service panel before cleaning, servicing, or removing thermostat.

Use a dry cloth to remove any dust from the thermostat cover. Do not use water or submerge the thermostat in water to clean. This can damage the thermostat.

If the thermostat does not operate properly, do not try to repair the thermostat yourself. This will void your warranty. Return thermostat, shipping prepaid, to:

Uni-Line North America
Warranty Department
515 S. Promenade Ave.
Corona, CA 91719

See warranty information at the end of this manual.

Replacing The Back-Up Batteries:

CAUTION: Installing batteries backwards can damage thermostat.

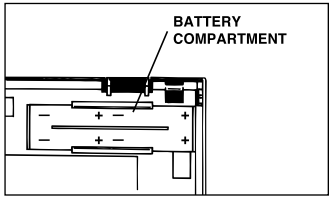
NOTE: Replace batteries with four "AA" alkaline batteries only.

1. Press SYSTEM button until "OFF" appears in the time field on the display.

SYSTEM

2. Remove thermostat from wiring subbase. (See "REMOVING THERMOSTAT FROM SUBBASE" for more information.)

3. Turn thermostat over. Locate battery compartment.



NOTE: Replace all four batteries at the same time. The thermostat will "hold" all programmed information for about 30 seconds without battery power. If 30 seconds elapse before batteries are replaced, the program will be lost.

4. Replace all batteries with four new "AA" alkaline batteries. Be sure the positive (+) ends of the batteries match the positive terminals in the battery compartment.

5. Replace thermostat onto wiring subbase.

6. Press SYSTEM button until HEAT or COOL shows on the right side of the display.

SYSTEM

REMOVING THERMOSTAT FROM WIRING SUBBASE

Your new thermostat can be removed from its wiring subbase for easy programming, resetting the thermostat, or changing the batteries. The wiring subbase will remain attached to the wall.

To remove thermostat from wiring subbase:

1. Press SYSTEM button until OFF is displayed in the time field.

SYSTEM

2. Gently lift the bottom of the thermostat up and out as shown in Figure 1.

3. Pull thermostat up and away from wiring subbase.

To replace thermostat onto wiring subbase:

1. Align slots on top of thermostat with square pins on subbase.

2. Latch the top of the thermostat into place. Pivot the thermostat down and push in to lock the bottom of the thermostat into place.

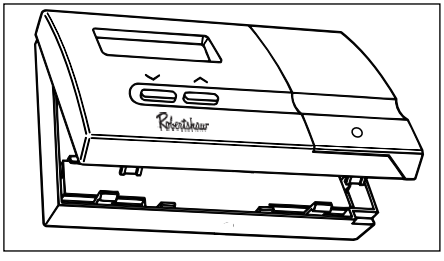
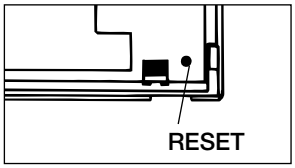


Figure 1

To replace thermostat onto wiring subbase (cont.):

3. Press SYSTEM button to put the thermostat into HEAT, COOL, or AUTO mode. The thermostat will return to normal operating mode.

You may reset the thermostat at any time. Reset is located on the back side of thermostat in the lower, right corner. See diagram. Pressing reset will erase ALL programmed information as well as time clock and day of week.



Changing dip switch settings:

1. Use a small screwdriver or pencil to move the switch to the desired setting.
2. Press RESET button. See Figure 5. Pressing RESET will erase any previously entered programming information.

NOTE: When changing the settings on "Switch 1", the Reset button does not have to be pressed for the new configuration to register or operate.
IMPORTANT: New dip switch settings for "Switch 2" will not register or operate options until the RESET button is pressed.

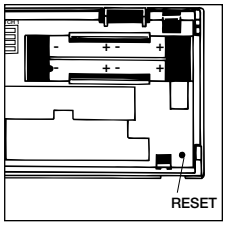


Figure 5

REPLACING THE BACK-UP BATTERIES

This thermostat is 24V AC powered and requires connection to both sides of transformer for proper operation. It also requires four charged "AA" ENERGIZER® brand batteries or equivalent alkaline batteries as a back-up source of power should the 24V AC circuit be interrupted temporarily due to a power outage. The battery back-up will maintain all program information during power outages.

This thermostat has two levels of low battery indication. As the back-up batteries weaken, the thermostat will go to the next stage of low battery indication.

Low Battery—Stage 1

"LO BATT" stays constant on the display. Replace batteries soon. Display and thermostat functions normal.

Low Battery—Stage 2

"LO BATT" stays constant on the display and thermostat "beeps" about once a minute. Replace batteries immediately. Display and thermostat functions normal.

CHANGING DIP SWITCH SETTINGS

Thermostat functions are determined by settings on two sets of dip switches: "SWITCH 1" and "SWITCH 2". These dip switches are pre-set at installation. However, some users may want to change some of the dip switch settings on SWITCH 2 to enable or change certain thermostat options.

Figure 3 shows the location of the dip switches. Figure 4 shows a close-up of the dip switches. Dip switches marked with an asterisk (*) should not be changed by the user. These are pre-set at time of installation by the installer and must only be changed by a certified contractor familiar with heating and air conditioning systems. Change only the dip switches necessary for options programming.

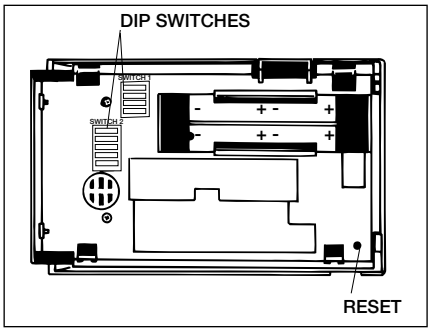


Figure 3

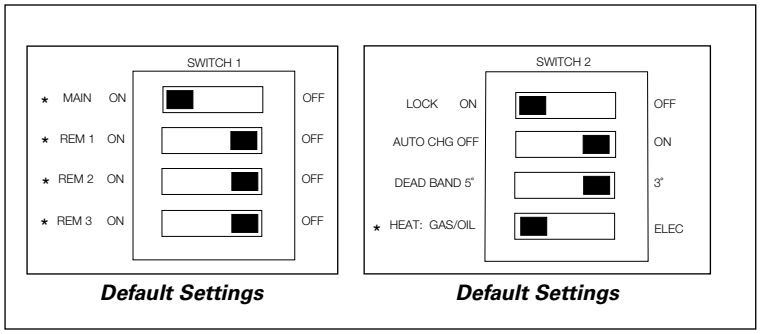


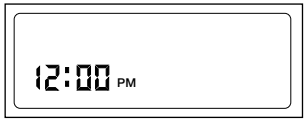
Figure 4

PROGRAMMING

Set or Change Time, Day, Temp. Differential, and Residual Cooling

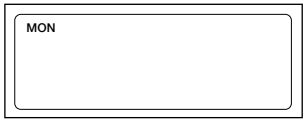
NOTE: During programming, the setting to be changed will appear on the display. If no key presses are made within 45 seconds, the display will revert to the main display. Press PROG/MAN button at any time during programming to return to the main display.

1. Press and hold SET button while pressing PROG/MAN button. Release both buttons. The display will show the time clock setting:

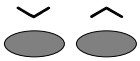


2. Press either ∨ or ∧ button to adjust the current time forward or backward. The time will change in one-minute increments each time you press either button. The time will scroll in 10-minute increments if you hold down either button. Note AM/PM indicator.

3. Press SET button. The day of the week will appear at the top of the display.



4. Press either ∨ or ∧ button to change to the current day of the week (MON, TUE, WED, THU, FRI, SAT, SUN).



5. Press SET button. The first stage temperature differential (1˚F) will appear on the display as 10˚.

6. Press either ∨ or ∧ button to change the first stage temperature differential. The differential may be adjusted from .5˚F (05˚), 1˚F (10˚), 1.5˚F (15˚), or 2˚F (20˚). (If your system cycles too often, increase the temperature differential setting.)

7. Press SET button. The second stage temperature differential (1.5˚F) will appear on the display as 15˚.

8. Press either ∨ or ∧ button to change the temperature differential. The differential may be adjusted from 1.5˚F (15˚), 2˚F (20˚), or 3˚F (30˚).

9. Press SET button.

NOTE: If SYSTEM button is in COOL, the display will show ":60." This is the residual cooling fan delay. If desired press either ∨ or ∧ button to adjust the fan delay to ":00", ":30", ":60", or ":90" seconds, then press set.

24V AC Circuit Power Monitor

If you experience a loss of power, this thermostat will indicate "-**AC**" in the time field of the LCD display. This means your system's 24V AC circuit is not receiving power or is not functioning correctly. The back-up batteries provided in this thermostat will maintain the programming during the loss of power, however, the thermostat requires 24V AC power and a functioning system for proper control.

LED Indicator

There is one LED indicator located on the front of your Robert Shaw thermostat. This turns on when the auxiliary (also called back-up) heating is in operation. This is the second (non-economy) stage of heat.

Your room temperature rises above the COOL setpoint programmed temperature setting, the thermostat will activate the COOL program. If the temperature continues to increase, the thermostat will turn on the COOL mode and COOL will slowly flash in the display, indicating that it is in operation. When the room temperature decreases to meet the COOL program setpoint temperature, the thermostat will stop the cooling system. COOL will be indicated in the display as active, but will not flash.

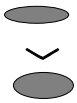
If the room temperature decreases below the HEAT setpoint programmed temperature setting, the thermostat will activate the HEAT program. If the temperature continues to decrease, the thermostat will turn on the heating system and HEAT will slowly flash in the display. This indicates that the heating system is currently in operation. When the room temperature increases to meet the HEAT program setpoint temperature, the thermostat will stop the heating system. HEAT will be indicated in the display as active, but will not flash.

NOTE: AUTO (Auto Changeover) operation can only be selected using the SYSTEM button while in PROGRAM mode. If the AUTO program feature is not functioning properly, see "CHANGING DIP SWITCH SETTINGS" to make sure AUTO CHANGEOVER was selected during installation.

NOTE: To change your current dead band setting, you must change a dip switch located on the back of the thermostat. See "CHANGING DIP SWITCH SETTINGS" section to change the dead band setting to either 3˚ or 5˚. Changing a dip switch setting will require resetting the thermostat to register the new selection. This will erase previously entered program.

Selecting ˚F/˚C

The thermostat displays temperatures in degrees Fahrenheit. If you wish to change the readout to Celsius:



1. Press and hold SET button while pressing ∨ button. Release both buttons. The display will switch from Fahrenheit to Celsius. If you wish to switch back to Fahrenheit, simply repeat this step.

NOTE: All differential control is done in˚F even though ˚C is selected as your display choice.

Program Overview

This programmable thermostat can have up to four setpoints per day (MORN, DAY, EVE, NIGHT). Each of these setpoints will have a time, temperature and programmable fan setting. The thermostat is pre-programmed with setpoints that meet the EPA's Energy Star® requirements. The use of these setpoints can greatly reduce energy bills for the average household. If the setpoints do not meet the needs of your household, they are fully adjustable to any settings desired. This thermostat will monitor the time of day and turn the system on or off, based on the temperature differential, to maintain the programmed or manually selected setpoint temperature.

To save money and energy, you can adjust these setpoint times and temperatures to provide set-back periods in program mode during the day or at night. The Energy Efficient Recovery (EER™) feature looks ahead up to 2 hours prior to the end of the set-back (or set-up) period to begin monitoring system performance and calculating when to turn on your system. It also determines whether the auxiliary heat or cool stages should be activated prior to setpoint time to meet your chosen setpoint temperature. The thermostat will indicate "**EER**" in the display when this program feature is active. The EER™ feature will lock out the auxiliary stages until 20 minutes prior to the upcoming setpoint time to utilize the most energy efficient first stage. The auxiliary stages of heating and cooling will be available after this lock-out period to maintain the setpoint temperature should the system not be able to keep up with the heating or cooling demand.

NOTE: New dip switch settings for dip switch #2 will not register or operate options until the RESET button is pressed. Pressing RESET will erase any previously entered programming information.

NOTE: If "AUTO CHANGEOVER" was enabled during installation, refer to "SELECTING AUTO CHANGEOVER" for restrictions on setting heating or cooling setpoint temperatures for proper operation. AUTO (changeover) will not function unless the thermostat is set to PROGRAM mode. If "AUTO CHANGEOVER" was disabled during installation, you may set heating or cooling setpoints to any temperature settings you desire.

NOTE: Both summer and winter programs use the same time settings and programmable fan settings.

Sample Program

Setting	Time	Summer	Winter
MORN	6:00 a.m.	78	70
DAY	8:00 a.m.	85	62
EVE	5:00 p.m.	78	70
NIGHT	10:00 p.m.	82	62

Your Program

Setting	Time	Summer	Winter
MORN			
DAY			
EVE			
NIGHT			

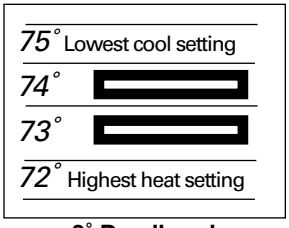
Selecting Auto Changeover

You may wish to set your thermostat so it will automatically choose between the HEAT or COOL programs for proper temperature control. This program feature is referred to as the AUTO (Auto Changeover) mode of system operation.

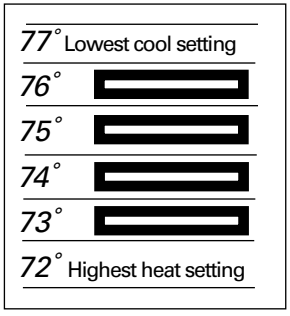
While in AUTO mode, the thermostat will constantly monitor the room temperature to determine whether to run the HEAT or COOL program to maintain comfort. To operate properly, the thermostat requires a "dead band" setting to eliminate program conflicts. The standard "dead band" setting is 3˚ between the highest HEAT temperature setting and the lowest COOL temperature setting for a given setpoint period. (There is an optional 5˚ "dead band" setting available. See "CHANGING DIP SWITCH SETTINGS.")

For example, if the highest HEAT temperature setting for the MORN setpoint is 72˚, then the lowest COOL temperature setting for a 3˚ "dead band" would be 75˚. The thermostat will emit a short "beep" if the user attempts to enter a temperature setting while in the HEAT or COOL program which would violate the established "dead band".

If you are in PROGRAM mode (PROG/MAN) and you have selected AUTO using the SYSTEM button, the thermostat will constantly compare the current room temperature to the current setpoint (MORN, DAY, EVE, NIGHT) temperature settings for the HEAT and COOL programs and choose which program is appropriate, for example:

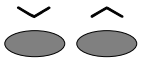


3˚ Deadband



5˚ Deadband (Optional)

You may press the ∨ or ∧ buttons to temporarily change the programmed temperature while in COOL or HEAT mode. The ∨ or ∧ buttons will not change the setting while the system is in AUTO. You may also press the PROG/MAN button to change to manual mode and manually change the temperature settings.



Resetting the Thermostat

If you ever experience a problem with the thermostat and find it is not working correctly, or want to erase the ENTIRE program, simply press and release the reset button. To access the RESET button, remove thermostat from wiring subbase. (See "REMOVING THERMOSTAT FROM WIRING SUBBASE.") Note reset location as shown in Figure 2. Use a small pin or paper clip to push in the reset button.

The reset button is only accessible when the main unit is removed from the wiring subbase. See "REMOVING THERMOSTAT FROM WIRING SUBBASE." This button will clear all the programs you have set and revert to the default settings.

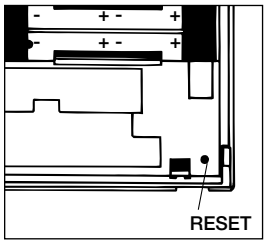


Figure 2

Compressor Protection

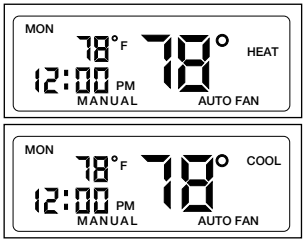
NOTE: While in Cool mode, once the thermostat turns the system off, a built-in delay prevents the compressor from turning on again for about 5 minutes. This protects the compressor. No additional time delay (delay on break) is necessary. To override the 5-minute delay for installation, press the INSTALL BYPASS. This will rease all delays.

Programming with QuickSet™

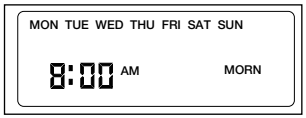
NOTE: To save valuable programming time, QuickSet™ allows you to set one schedule that is automatically copied to each individual day of the week. You may then go into the program and change any specific day, time setting, or temperature setting to suit your personalized schedule.

NOTE: The thermostat will not allow programs to be entered in the OFF or AUTO modes. Program in HEAT or COOL modes only.

1. Press the SYSTEM button until the word "HEAT"or "COOL" appears on the right side of the display.



2. Press QUICKSET button. The display will show all the days of the week at the top of the display. This signals that you are in QuickSet™ mode. "MORN" is the first setting for the day. The display will show the setpoint time.

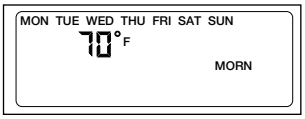


3. Press either ∨ or ∧ button to adjust the time setting for MORN. (Note: Holding down either ∨ or ∧ button scrolls the time in 30 minute increments.)

4. Press SET button. The display will show the setpoint temperature

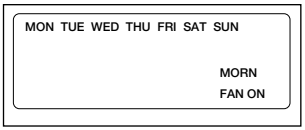
NOTE: Pressing QUICKSET button instead of the SET button will also save your program settings.

5. Press either ∨ or ∧ button to adjust the setpoint temperature for the programmed MORN time. (**NOTE:** Holding down either ∨ or ∧ button scrolls the temperature in 1˚ increments.)



6. Press SET button. The display will flash AUTO with FAN.

7. Press either ∨ or ∧ button to program the fan to be in AUTO (fan cycles with system when required for heating or cooling) or ON (fan remains on continuously) for the individual daily setpoint you are programming.



8. Press SET button.

9. Repeat steps 3-8 for the remaining DAY, EVE, and NIGHT settings.

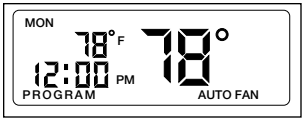
OPERATION

The thermostat is now ready to run your saved programs and automatically control the temperature at your programmed time settings. The thermostat will "flash" the word "heat" or "cool" in the main display when the system is active.

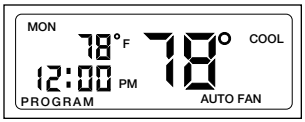
Beginning Programmed Operation:

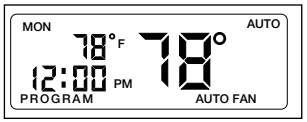
NOTE: DO NOT switch system to COOL if outside temperature is below 50˚F. This can damage the compressor/condenser unit on your system.

1. Press PROG/MAN button until the display shows that the thermostat is in the PROGRAM mode. This will allow you to begin programmed operation.



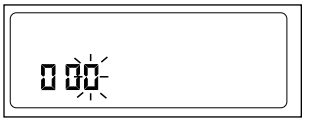
2. Press SYSTEM button until HEAT, COOL, or AUTO appears on the display (depending on the season). COOL will control the air conditioner. HEAT will control the heating system. AUTO will automatically choose between the HEAT or COOL programs, depending on the temperature. (See "SELECTING AUTO CHANGEOVER" for more information.) OFF will show in the time field when the thermostat is off and not operating the system. Depending on whether the fan is programmed or manually set to AUTO or ON, the fan will automatically run (with or without a delay) along with your program.



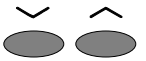


5. Press SET button to save second digit. The third digit will flash.

SET

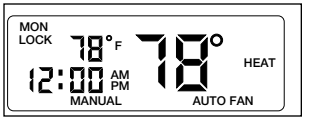


6. Press ∨ or ∧ button to enter the third (right) digit.



7. Press SET button to save third digit. "Lock" appears on the screen and your combination is now saved.

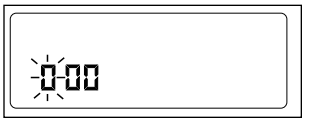
SET



Unlocking keypad:

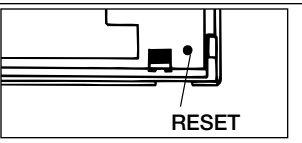
1. Press LOCK button. The display will show "000."

LOCK



2. Follow steps 2-7 as listed above in "Setting your combination and lock keypad." If combination is correct, the word "LOCK" will disappear from the display and the program may be changed. If combination is not correct, the thermostat will display the word "no" and return to normal display mode.

If, for any reason, you have forgotten your combination or are unable to unlock the keypad, press reset button on the rear of the thermostat. See "REMOVING THERMOSTAT FROM SUBBASE" and "Resetting the Thermostat." Pressing reset will erase ALL programmed information as well as time clock and day of week.



10. Press SYSTEM button for opposite program (HEAT or COOL).

SYSTEM

11. Repeat the above steps to enter the temperature settings for the opposite season.

NOTE: When programming opposite season, remember that both programs use the same time settings and programmable fan settings.

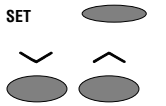
Review, Change, or Personalize Program

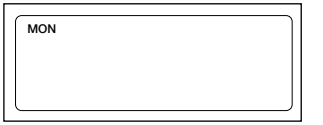
NOTE: The thermostat will not allow programs to be entered in the OFF or AUTO modes. Program only in HEAT or COOL modes.

1. Press the SYSTEM button until the word "HEAT" or "COOL" appears on the right side of the display.

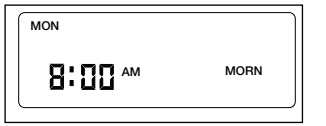
SYSTEM

2. Press SET button. The display will show the current day of the week or the last programmed day. Press ∨ or ∧ to advance to the day of the week you will program.





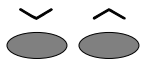
3. Press SET button. The display will show the time setting:



4. Press either ∨ or ∧ button to adjust the time setting for MORN. (Note: Either ∨ or ∧ button scrolls the time in 30 minute increments.)

5. Press SET button. The display will show the setpoint temperature (70˚ for winter, heat program or 78˚ for summer, cool program).

6. Press either ∨ or ∧ button to adjust the temperature setpoint for the programmed MORN time.



Programming Keypad Lock

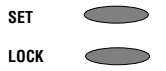
NOTE: In order for the lock function to work as described below, the "LOCK" function must have been enabled during installation. If the Lock function does not seem to work, you must change a dip switch located on the back of the thermostat. See “CHANGING DIP SWITCH SETTINGS” section to turn the “LOCK” function on.

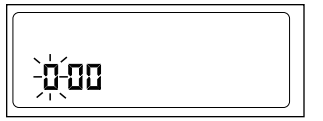
This thermostat has a keypad lock that will prevent unauthorized program changes. When the keypad is locked, the user must enter the 3-digit combination or the keypad will not allow programming changes.

IMPORTANT: Please write down your chosen 3-digit combination in a convenient location away from the thermostat. The thermostat WILL NOT let you change the settings or the mode if you forget the combination. When the thermostat "LOCK" function is on, only the LOCK keypad button is functional until the thermostat is unlocked.

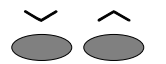
Setting your combination and lock keypad:

1. Press SET and LOCK buttons at the same time. Release both buttons. The display will show "000." The first digit will flash.

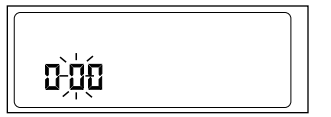




2. Press ∨ or ∧ button to enter the first (left) digit.



3. Press SET button to save first digit. The second digit will flash.



4. Press ∨ or ∧ button to enter the second (middle) digit.

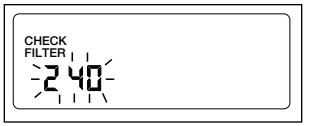
Programming Filter Monitor

The filter monitor keeps track of the total time the system fan has been in operation during the heating or cooling modes. The "Check Filter" message appears when the hours of fan operation equals your programmed filter monitor hours setting.

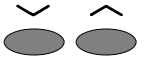
1. Press SET and FILTER buttons at the same time. Release both buttons. The display will show:

SET

FILTER



2. Press ∨ or ∧ button to change filter hours setting (between 0 to 960 in 60 hour increments). The default is 240 hours (based on average 30 day month at 8 hours per day fan operation). A setting of 0 hours disables this feature.



3. Press SET button to save setting.

SET

Checking Filter Monitor

1. Press FILTER button. The current hours of fan operation since last reset are shown for reference.

FILTER

2. The main display will return after a few seconds.

Resetting Filter Monitor

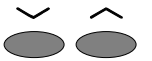
1. When filter needs to be serviced, "Check Filter" will show in main display indicating that the hours of fan operation have met your programmed filter servicing interval.

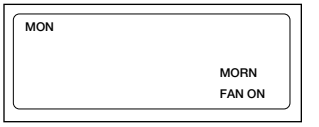
2. After servicing the filter, repeat steps 1-3 to reset/reprogram your filter monitor.

7. Press SET button. The display will show AUTO with FAN.

SET

8. Press either ∨ or ∧ button to adjust the fan setting to be in AUTO (fan controlled by system when required for heating or cooling) or ON (fan remains on continuously) for the individual daily setpoint you are programming.





9. Press SET button.

SET

10. Repeat steps 3-9 for the remaining DAY, EVE, and NIGHT settings.

11. Press SYSTEM button for opposite program (HEAT or COOL).

SYSTEM

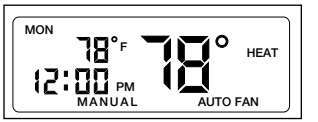
12. Press SET button and repeat above steps for opposite program.

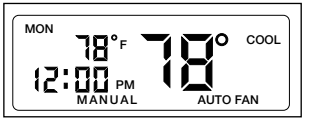
SET

NOTE: Program changes made to setpoint times, temperatures, or fan operation are not saved in memory unless you finish the operation by pressing the SET button after each entry as shown above.

NOTE: When programming opposite season, remember that both programs use the same time and programmable fan settings.

Review or Modify Program



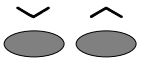


1. Press SYSTEM button until the word "HEAT" or "COOL" appears on the right side of the display. This will choose the program you wish to review or modify.

2. Press SET button.

3. To advance through each day's programmed setpoint times, temperatures, and fan settings continue to press the SET button. Each time you press the SET button, the LCD display will advance to the next setting in the program.

4. Press ∨ or ∧ button to change any individual day's setpoint times, temperatures, or fan settings.



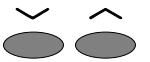
5. Press SET button to save any changes and continue reviewing your program.

6. Repeat 1-5 to review or modify the opposite program.

Temporary Program Override

You may temporarily change the temperature setting at any time without affecting the program, even if the program is running.

1. Press either ∨ or ∧ button to adjust the temperature.



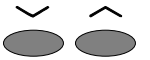
2. The thermostat will automatically return to the program at the next scheduled setting change, or 4 hours, whichever comes first.

Manual Operation

Manual operation allows the thermostat to remain at a constant temperature and override the programmed schedules – just like a non-programmable type thermostat. To change to manual operation:

1. Press PROG/MAN button until the word "MANUAL" appears in the display.

2. Adjust the temperature settings, if desired, by pressing either ∨ or ∧ button.



To change back to the program schedule, press PROG/MAN button.

NOTE: The thermostat will continue to operate in the MANUAL mode until placed back into the program mode.

Energy Efficient Recovery (EER™)

The Energy Efficient Recovery (EER™) feature looks ahead up to 2 hours prior to the end of the set-back (or set-up) period to begin monitoring system performance and calculating when to turn on your system. It also determines whether the auxiliary heat or cool stages should be activated prior to setpoint time to meet your chosen setpoint temperature. The thermostat will indicate "**EER**" in the display when this program feature is active. The EER™ feature will lock out the auxiliary stages until 30 minutes prior to the upcoming setpoint time to utilize the most energy efficient first stage. The auxiliary stages of heating and cooling will be available during this lock-out period to maintain the setpoint temperature should the system not be able to keep up with the heating or cooling demand.